LISTING OF CLAIMS:

Please amend the claims as indicated:

1. (Previously Amended) A coin having a metal surface structured with macroscopic reliefs for the representation of motifs which serve to specify the coin value and as a recognition feature, and fields of the surface, which are arranged on a circular ring around the center point of the coin and which have microscopically fine relief structures with a diffraction action and which form an optically machine-readable identification, wherein the relief structures in the fields are gratings which are of the same spatial frequency (f), and that the relief structures differ by their azimuth (Ω) relative to the radial direction and/or by a symmetrical or asymmetrical relief profile.

2. (Previously Amended) A coin having a metal surface structured with macroscopic reliefs for the representation of motifs which serve to specify the coin value and as a recognition feature, and fields of the surface, of which at least one has a microscopically fine relief structure with a diffraction action and which form an optically machine-readable identification, wherein the relief structures of the identification are selected from M groups of gratings, that the grating vectors of all gratings of the M groups are radially oriented, that in each of the M groups the spatial frequency (f) of the relief structure is selected in dependence on the radial spacing (R) of the field from the center point of the coin such that upon illumination of the relief structure by means of a light source in point form arranged perpendicularly above the center point, with the

wavelength (λ), one of the two partial beams of the diffracted light crosses the center point at a spacing (h_D) which is predetermined for said group.

3. (Previously Amended) A coin as set forth in claim 1 wherein the macroscopic relief structures are arranged on the bottom of recesses let into the surface of the coin.

4. (Previously Amended) A coin as set forth in claim 3 wherein arranged in the recesses is a suitable portion of a plastic material laminate containing the relief structures.

5. (Previously Amended) A coin as set forth in claim 1, wherein the microscopic relief structures are formed directly in the surface in the fields.

6. (Previously Amended) A coin as set forth in claim 1, wherein the microscopic relief structures are covered over with a transparent protective lacquer which fills the grooves of the relief structures.

7. (Currently Amended) A coin tester <u>for testing a coin as set forth in claim 1, said coin tester</u> comprising a reading device which includes light sources, photodetectors and an electronic circuit connected to the light sources and the photodetectors and which is adapted for machine checking of the identification with relief structures of ~~a~~ <u>the</u> coin rolling or sliding in a coin passage on a rolling surface, ~~as set forth in claim 1,~~ wherein a light source is arranged for illuminating a surface of the coin with approximately monochromatic light laterally in relation to the coin passage, that a chord of the coin which is 1.5 mm wide maximum and which is

perpendicular to the rolling plane is illuminated with the perpendicularly incident light beams, that at least one photodetector is associated with each relative azimuth (Ω) of the gratings, which is admissible for identification of the coins, that a diffractive optical element for deflection of partial beams of the diffracted light of a field illuminated in the region of the chord at the height (H) is arranged between the coin passage and the photodetectors and that the diffractive optical element is adapted to rotate the diffraction plane defined by the partial beams through a rolling angle (β) dependent on the height (H) with an axis of rotation parallel to the light beams upon the passage through the diffractive optical element, in such a way that after said passage the partial beams are oriented on to at least one photodetector associated with the azimuth (Ω).

8. (Previously Amended) A coin tester as set forth in claim 7 wherein a pair of photodetectors is associated with each admissible relative azimuth (Ω), that after rotation of the diffraction plane to compensate for the rolling angle (β) each of the two partial beams is oriented on to one of the two photodetectors of the pair associated with the predetermined relative azimuth (Ω), and that the electronic circuit is adapted by way of the photodetectors to detect asymmetry of the intensity of the two partial beams .

9. (Currently Amended) A coin tester <u>for testing a coin as set forth in claim 2, said coin tester</u> comprising a reading device which includes light sources, photodetectors and an electronic circuit connected to the light sources and the photodetectors and which is adapted for machine checking of the identification with relief structures of ~~a~~ <u>the</u> coin rolling or sliding in a

coin passage on a rolling surface, ~~as set forth in claim 2,~~ wherein an optical axis of the reading device is established by at least one photodetector and at least one light source in point form, that the optical axis is oriented perpendicularly with respect to a side wall of the coin passage and is at a spacing (a) from the rolling surface, which corresponds to the radius of the coin to be tested, that the light source is arranged at a spacing (h_Q) and each photodetector is arranged at a spacing (h_D) from the surface of the coin such that monochromatic light of the wavelength λ emitted by the light source is diffracted by at least one relief structure of the coin to be tested as a partial beam towards the optical axis and is concentrated on the predetermined photodetector arranged at the spacing (h_D), and that the electronic circuit is adapted to recognise the passage of the center point of the coin through the optical axis and the authenticity of the coin from the electrical signals of the photodetectors, which signals are proportional to the intensity of the partial beam.

10. (Previously Amended) A coin tester as set forth in claim 7, wherein the monochromatic light beam from the light source is of a wavelength (λ) from a number of predetermined wavelengths (λ_1, λ_2), and that a command of the electronic circuit to the light source determines the wavelength (λ) of the emitted light beam.

11. (Currently Amended) A method of applying a microscopic relief structure to a coin as set forth in claim 1, wherein said coin has a comparatively hard material surface, and

wherein the microscopic relief structure is produced by the removal of material by means of exposure of the material surface with a laser beam.

12. (Previously Amended) A method as set forth in claim 11 wherein the laser beam passes a mask determining the form of the microscopic relief structure and then an optical image-forming system for reduction purposes.

13. (Previously Amended) A method as set forth in claim 11 wherein the laser in accordance with the method of dual beam interference produces on the material surface a microscopically fine interference pattern of a predetermined spatial frequency (f) and the material of the surface is removed at the locations of increased intensity in the interference pattern to produce the microscopic relief structure.

14. (Currently Amended) A method of applying a microscopic relief structure to a coin as set forth in claim 1, wherein said coin has a comparatively hard material surface, said method comprising:

applying a thin light-sensitive plastic material layer to the material surface,

exposing and developing the plastic material layer so that microscopically fine locations of the material surface are free of plastic material,

etching the material surface, with the microscopic relief structure being formed, and

removing the plastic material layer.

15. (Previously Amended) A method as set forth in claim 11, wherein the material surface with the previously produced relief structures is hardened by nitriding.

Please add the following claims:

16. (New) A method of applying a microscopic relief structure to a coin as set forth in claim 2, wherein said coin has a comparatively hard material surface, and wherein the microscopic relief structure is produced by the removal of material by means of exposure of the material surface with a laser beam.

17. (New) A method of applying a microscopic relief structure to a coin as set forth in claim 2, wherein said coin has a comparatively hard material surface, said method comprising:

applying a thin light-sensitive plastic material layer to the material surface,

exposing and developing the plastic material layer so that microscopically fine locations of the material surface are free of plastic material,

etching the material surface, with the microscopic relief structure being formed, and

removing the plastic material layer.